

WHAT IS CLAIMED IS:

1. An electronic device including a mechanical module, comprising:
 - a drive source that provides drive force to the mechanical module;
 - a power supply device capable of supplying drive power to the drive source while changing the drive power;
 - a detector that detects a condition change of the mechanical module from a static condition to a dynamic condition, when the power supply device supplies the drive power to the drive source; and
 - a storage device that stores a value, at a time of detection by the detector, that is associated with the drive force of the drive source or the drive power, as an alternative characteristic value of static load on the mechanical module.
2. The electronic device according to claim 1, wherein the mechanical module includes a guide shaft, a carriage that reciprocates along the guide shaft, a print head mounted on the carriage, and a transmission device that transmits the drive force from the drive source to the carriage, and the detector detects the condition change of the carriage, from the static condition to the dynamic condition, along the guide shaft.
3. The electronic device according to claim 2, wherein the detector detects at a plurality of detection positions which are set throughout a moving range of the carriage and the alternative characteristic value obtained at each of the plurality of the detection positions is stored in the storage device.
4. The electronic device according to claim 3, wherein at least one of the plurality of the detection positions is included in each of a space adjustment area where space between the print head and a print medium is adjusted, a printing area where the print head performs printing onto the print medium, and a standby area where the print head stands by when the print head does not perform printing.
5. The electronic device according to claim 1, further comprising a calculation device that calculates at least one of maximum and minimum values associated with the drive force or the drive power, wherein the detector detects at one detection position a plurality of times, the calculation device calculates the at least one of the maximum and minimum values of a plurality of values that are detected by the detector, and the calculated value is stored in the storage device, as the alternative characteristic value for the one detection position.
6. The electronic device according to claim 4, further comprising a calculation device that calculates at least one of maximum and minimum values associated with the

drive force or the drive power, wherein the detector detects at a plurality of detection positions in a determined area, the calculation device calculates the at least one of the maximum and minimum values of a plurality values that are detected by the detector, and the calculated value is stored in the storage device, as the alternative characteristic value for the determined area.

7. The electronic device according to claim 1, further comprising a calculation device that calculates an average of values associated with the drive force or the drive power, wherein the detector detects at one detection position a plurality of times, the calculation device calculates the average of a plurality values that are detected by the detector, and the calculated average is stored in the storage device, as the alternative characteristic value for the one detection position.

8. The electronic device according to claim 4, further comprising a calculation device that calculates an average of values associated with the drive force or the drive power, wherein the detector detects at a plurality of detection positions in a determined area, the calculation device calculates the average of a plurality values that are detected by the detector, and the calculated average is stored in the storage device, as the alternative characteristic value for the determined area.

9. The electronic device according to claim 1, further comprising a calculation device that calculates an average of values associated with the drive force or the drive power, wherein the detector detects at one detection position a plurality of times, the calculation device calculates the average of maximum and minimum values of a plurality values that are detected by the detector, and the calculated average is stored in the storage device, as the alternative characteristic value for the one detection position.

10. The electronic device according to claim 4, further comprising a calculation device that calculates an average of values associated with the drive force or the drive power, wherein the detector detects at a plurality of detection positions in a determined area, the calculation device calculates the average of maximum and minimum values of the plurality values that are detected by the detector, and the calculated average is stored in the storage device, as the alternative characteristic value for the determined area.

11. The electronic device according to claim 1, further comprising:
an input device that inputs a start of storing the alternative characteristic value into the storage device; and

a display device that displays a status of the mechanical module as to whether the mechanical module is conforming or nonconforming, based on the alternative characteristic value stored in the storage device; and

wherein as the input device inputs the start of storing the alternative characteristic value into the storage device, the display device displays the status of the mechanical module as to whether the mechanical module is conforming or nonconforming.

12. The electronic device according to claim 1, further comprising a communication device that is connected to an information processing device to send information thereto and receive the information therefrom, wherein when the information processing device makes a request to send the alternative characteristic value thereto, the alternative characteristic value stored in the storage device is sent to the information processing device, through the communication device.

13. The electronic device according to claim 1, wherein the storage device is a non-volatile memory.

14. The electronic device according to claim 1, wherein the value associated with the drive force of the drive source or the drive power stored in the storage device as the alternative characteristic value is an electric current value or a pulse width modulation duty value.

15. A method for obtaining an alternative characteristic value, the method being executed in an electronic device including a mechanical module, a drive source that provides drive force to the mechanical module, a power supply device capable of supplying drive power to the drive source while changing the drive power, and a storage device that stores therein the alternative characteristic value, the method comprising the steps of:

supplying the drive power from the power supply device to the drive source while changing the drive power;

detecting a condition change of the mechanical module from a static condition to a dynamic condition, when the power supply device supplies the drive power to the drive source while changing the drive power in the supplying step; and

storing in the storage device a value, at a time of detection in the detecting step, that is associated with the drive force of the drive source or the drive power, as the alternative characteristic value of static load on the mechanical module.

16. The method according to claim 15, wherein the mechanical module includes a guide shaft, a carriage that reciprocates along the guide shaft, a print head mounted on the carriage, and a transmission device that transmits the drive force from the drive source to the

carriage, and the detecting step detects the condition change of the carriage, from the static condition to the dynamic condition along the guide shaft, when the power supply device supplies the drive power to the drive source while changing the drive power.

17. The method according to claim 16, wherein the detecting is performed at a plurality of detection positions and the alternative characteristic value obtained at each of the plurality of the detection positions is stored in the storage device.

18. The method according to claim 17, wherein at least one of the plurality of the detection positions is included in each of a space adjustment area where space between the print head and a print medium is adjusted, a printing area where the print head performs printing onto the print medium, and a standby area where the print head stands by when the print head does not perform printing.

19. The method according to claim 15, further comprising a calculating step in which at least one of maximum and minimum values associated with the drive force or the drive power is calculated, wherein the detecting is performed at one detection position a plurality of times, the at least one of the maximum and minimum values of a plurality of values, that are detected by the detector, is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the one detection position.

20. The method according to claim 18, further comprising a calculating step in which at least one of maximum and minimum values associated with the drive force or the drive power is calculated, wherein the detecting is made at a plurality of detection positions of a determined area, the at least one of the maximum and minimum values of a plurality of values, that are detected by the detector, is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the determined area.

21. The method according to claim 15, further comprising a calculating step in which an average of values associated with the drive force or the drive power is calculated, wherein the detecting is performed at one detection position a plurality of times, the average of the plurality of values that are detected by the detector is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the one detection position.

22. The method according to claim 18, further comprising a calculating step in which an average of values associated with the drive force or the drive power is calculated, wherein the detecting is performed at a plurality of detection positions of a determined area,

the average of the plurality of values that are detected by the detector is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the determined area.

23. The method according to claim 15, further comprising a calculating step in which an average of values associated with the drive force or the drive power is calculated, wherein the detecting is performed at one detection position a plurality of times, the average of maximum and minimum values of the plurality of values that are detected by the detector is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the one detection position.

24. The method according to claim 18, further comprising a calculating step in which an average of values associated with the drive force or the drive power is calculated, wherein the detecting is performed at a plurality of detection positions of a determined area, the average of maximum and minimum values of the plurality of values that are detected by the detector is calculated in the calculation step, and the calculated value is stored in the storage device, as the alternative characteristic value for the determined area.

25. The method according to claim 15, further comprising the steps of:
inputting a start of storing the alternative characteristic value into the storage device;
and
displaying a status of the mechanical module as to whether the mechanical module is conforming or nonconforming, based on the alternative characteristic value stored in the storage device; and

wherein as the start of storing the alternative characteristic value into the storage device is input, the status of the mechanical module as to whether the mechanical module is conforming or nonconforming is displayed.

26. The method according to claim 15, further comprising the step of sending the alternative characteristic value stored in the storage device to an information processing device, when a request for sending the alternative characteristic value is externally made by the information processing device.

27. The method according to claim 15, wherein the storage device is a non-volatile memory.

28. The method according to claim 15, wherein the value associated with the drive force of the drive source or the drive power stored as the alternative characteristic value is an electric current value or a pulse width modulation duty value.